

## Claims

*Jul 16/81*  
**The first item .**

1- A detector that can detect ,Monitor & register the resistance of the tissues to piercing ,its resistance to passage of electrical current & the electrical activity of the tissues to help in identification of the nature of the tissue during needle biopsy before the actual cutting of the tissue as well as prediction of the nature of its pathology .

3- A visual , auditory or electrical intensity or voltage detector (Ammeter or voltmeter ) with possibility of adding a registering unit on sensitive paper for the physical resistance to entry of the sensor in different tissues while applying a constant pressure ,

4- A visual , auditory or electrical intensity or voltage detector (Ammeter or voltmeter ) with possibility of adding a registering unit on sensitive paper for the electrical resistance to passage of the electrical current in different tissues.

5- The registering unit for the electrical activity of different tissues similar to that used in the ( E.C.G.), (E.E.G.) or ( E.M.G.) .

### **The second item.**

- 1- The sensor of the detector have the same size & shape of the internal needle of the biopsy needle so that it can be used simultaneously during the biopsy taking without the need to introduce through a different orifice.
- 2- The sensor has an inbuilt changeable resistance that changes according to the resistance faced by the needle during introduction in the tissue with a constant speed .
- 3- The sensor has 2 adjacent points of electrical circuit at a fixed distance . The electrical circuit is closed by the living tissues which have different resistance to the electrical current.
- 4- The body of the sensor as passing in the tissue work as an earth electrode (or a separate electrode can be connected to the skin) while the tip of the sensor detect the electrical activity –if any - of target or the in way tissues.

### **The third item .**

- \* A Computerized analysis unit to give instantaneous anatomical & pathological diagnostic information of the tissue at the tip of the sensor based on the data derived from the monitor .